

97-99E - Sequence List  
SEQUENCE LISTING

<110> The Board of Trustees of the University of Illinois  
Wittrup, et al.

<120> Yeast Cell Surface Display of Proteins and Uses Thereof

<130> 97-99E

<140> not available

<141> 2003-12-16

<150> US 09/724,108

<151> 2000-11-28

<150> US 09/009,388

<151> 1998-01-20

<150> US 08/866,398

<151> 1997-05-30

<150> US 60/018,741

<151> 1996-05-31

<160> 26

<170> PatentIn version 3.0

<210> 1

<211> 9

<212> PRT

<213> Unknown

<220>

<221> misc\_feature

<222> ()..()

<223> Epitope tag

<400> 1

Tyr Pro Tyr Asp Val Pro Asp Tyr Ala  
1 5

<210> 2

<211> 10

<212> PRT

<213> unknown

<220>

<221> misc\_feature

<222> ()..()

<223> Epitope tag

<400> 2

Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu  
1 5 10

<210> 3

<211> 6

<212> PRT

# 97-99E - Sequence List

<213> unknown

<220>

<221> misc\_feature

<222> ()..()

<223> Epitope tag

<400> 3

Asp Thr Tyr Arg Tyr Ile  
1 5

<210> 4

<211> 6

<212> PRT

<213> unknown

<220>

<221> misc\_feature

<222> ()..()

<223> Epitope tag

<400> 4

Thr Asp Phe Tyr Leu Lys  
1 5

<210> 5

<211> 9

<212> PRT

<213> unknown

<220>

<221> misc\_feature

<222> ()..()

<223> Epitope tag

<400> 5

Glu Glu Glu Glu Tyr Met Pro Met Glu  
1 5

<210> 6

<211> 11

<212> PRT

<213> unknown

<220>

<221> misc\_feature

<222> ()..()

<223> Epitope tag

<400> 6

Lys Pro Pro Thr Pro Pro Pro Glu Pro Glu Thr  
1 5 10

<210> 7

<211> 6

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<212> PRT  
<213> unknown

<220>  
<221> misc\_feature  
<222> ()..()  
<223> Epitope tag

<400> 7

His His His His His His  
1 5

<210> 8  
<211> 5  
<212> PRT  
<213> unknown

<220>  
<221> misc\_feature  
<222> ()..()  
<223> Epitope tag

<400> 8

Arg Tyr Ile Arg Ser  
1 5

<210> 9  
<211> 8  
<212> PRT  
<213> unknown

<220>  
<221> misc\_feature  
<222> ()..()  
<223> Epitope tag

<400> 9

Asp Tyr Lys Asp Asp Asp Asp Lys  
1 5

<210> 10  
<211> 30  
<212> DNA  
<213> artificial sequence

<220>  
<221> misc\_feature  
<222> ()..()  
<223> PCT primer towards AGA2 gene of *S. cerevisiae*

<400> 10  
attagaattc cctacttcat acattttcaa

30

<210> 11  
<211> 73

# 97-99E - Sequence List

<212> DNA  
 <213> artificial sequence  
  
 <220>  
 <221> misc\_feature  
 <222> ()..()  
 <223> PCT primer towards AGA2 gene of *S. cerevisiae*  
  
 <400> 11  
 attactcgag ctattactgc agagcgtagt ctggaacgtc gtatgggtaa aaaacatact 60  
 gtgtgtttat ggg 73  
  
 <210> 12  
 <211> 71  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <221> misc\_feature  
 <222> ()..()  
 <223> PCT primer towards the factor Xa recognition sequence  
  
 <400> 12  
 tcgacgattg aaggtagata ccatacgac gttccagact acgctctgca gtaatagatt 60  
 atcctcgagc t 71  
  
 <210> 13  
 <211> 63  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <221> misc\_feature  
 <222> ()..()  
 <223> PCR primer towards the factor Xa recognition sequence  
  
 <400> 13  
 cgaggataat ctattactgc agagcgtagt ctggaacgtc gtatgggtat ctaccttcaa 60  
 tcg 63  
  
 <210> 14  
 <211> 10  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <221> misc\_feature  
 <222> ()..()  
 <223> PCR primer towards Gal promoter  
  
 <400> 14  
 aattggtacc 10  
  
 <210> 15  
 <211> 10  
 <212> DNA  
 <213> artificial sequence

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<220>  
 <221> misc\_feature  
 <222> (..)()  
 <223> PCR primer towards Gal promoter

<400> 15  
 gatcgaattc 10

<210> 16  
 <211> 34  
 <212> DNA  
 <213> artificial sequence

<220>  
 <221> misc\_feature  
 <222> (..)()  
 <223> PCR primer towards 4-4-20 scFv

<400> 16  
 gggtggccaa gctagcgacg tcgttatgac tcaa 34

<210> 17  
 <211> 70  
 <212> DNA  
 <213> artificial sequence

<220>  
 <221> misc\_feature  
 <222> (..)()  
 <223> PCR primer towards 4-4-20 scFv

<400> 17  
 ggccggccaa ctcgagctat tacaagtcct cttcagaaat aagcttttgt tctgaggaga 60  
 cggtgactga 70

<210> 18  
 <211> 30  
 <212> DNA  
 <213> artificial sequence

<220>  
 <221> misc\_feature  
 <222> (..)()  
 <223> PCR primer towards AGA1 gene of S. cerevisiae

<400> 18  
 attagaattc agctaaaaaa accaaaaaat 30

<210> 19  
 <211> 33  
 <212> DNA  
 <213> artificial sequence

<220>  
 <221> misc\_feature  
 <222> (..)()  
 <223> PCR primer towards AGA1 gene of S. cerevisiae

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<400> 19  
attactcgag ctattaactg aaaattacat tgc 33

<210> 20  
<211> 1172  
<212> DNA  
<213> artificial sequence  
  
<220>  
<221> misc\_feature  
<222> ()..()  
<223> Cloned PCR products to produce AFA2-HA-4-4-20 gene cassette

<400> 20  
attagaattc cctacttcat acattttcaa ttaagatgca gttacttcgc tgtttttcaa 60  
tattttctgt tattgcttca gtttttagcac aggaactgac aactatatgc gagcaaatcc 120  
cctcaccaac tttagaatcg acgccgtact ctttgtcaac gactactatt ttggccaacg 180  
ggaaggcaat gcaaggagtt tttgaatatt acaaatcagt aacgtttgtc agtaattgcy 240  
gttctcacc cccaacaact agcaaaggca gccccataaa cacacagtat gtttttaagg 300  
acaatagctc gacgattgaa ggtagatacc catacgacgt tccagactac gctctgcagg 360  
ctagcgacgt cgttatgact caaacaccac tatcacttcc tgttagtcta ggagatcaag 420  
cctccatctc ttgcagatct agtcagagcc ttgtacacag taatggaaac acctatttac 480  
gttggtacct gcagaagcca ggccagtctc caaaggctct gatctacaaa gtttccaacc 540  
gattttctgg ggtcccagac aggttcagtg gcagtggatc agggacagat ttcacactca 600  
agatcagcag agtgaggagct gaggatctgg gagtttattt ctgctctcaa agtacacatg 660  
ttccgtggac gttcgggtgga ggcaccaagc ttgaaattaa gtcctctgct gatgatgcta 720  
agaaggatgc tgctaagaag gatgatgcta agaaagatga tgctaagaaa gatggtgacg 780  
tcaaactgga tgagactgga ggaggcttgg tgcaacctgg gagggccatg aaactctcct 840  
gtgttgccctc tggattcact tttagtgact actggatgaa ctgggtccgc cagtctccag 900  
agaaaggact ggagtgggta gcacaaatta gaaacaaacc ttataattat gaaacatatt 960  
attcagattc tgtgaaaggc agattcacca tgtcaagaga tgattccaaa agtagtgtct 1020  
acctgcaaat gaacaactta agagttgaag acatgggtat ctattactgt acgggttctt 1080  
actatggtat ggactactgg ggtcaaggaa cctcagtcac cgtctcctca gaacaaaagc 1140  
ttatttctga agaagacttg taatagctcg ag 1172

<210> 21  
<211> 366  
<212> DNA  
<213> artificial sequence

# 97-99E - Sequence List

<220>

<221> misc\_feature

<222> ()..()

<223> PCR products of wild type scFv-KJ16

<400> 21

gacgtcctgg tgacccaaac tcctgcctcc ctgtctgcat ctccggatga atctgtcacc 60

atcacatgcc aggcagcca ggacattggg acttcgtagg ttgggtatca gcagaaacca 120

gggaaatctc ctgagctcct ggtctatagt gcaactatct tggcagatgg ggtcccatca 180

aggttcagtg gcagtagatc tggcacacag tattctctta agatcaacag actacagggt 240

gaagatattg gaacctatta ctgtctacag gtttctagtt ctccgtacac gtttggagct 300

ggcaccaagc tggagctcaa acggctcctca gaacaaaagc ttatttccga agaagatttg 360

tagtaa 366

<210> 22

<211> 366

<212> DNA

<213> artificial sequence

<220>

<221> misc\_feature

<222> ()..()

<223> PCR products of KJ16-mut4

<400> 22

gacgtcctgg tgacccaaac tcctgcctcc ctgtctgcat ctccggatga atctgtcacc 60

atcacatgcc aggcagcca ggacattggg acttcgtagg ttgggtatca gcagaaacca 120

gggaaatctc ctgagctcct ggtctatagt gcaactatct tggcagatgg ggtcccatca 180

aggttcagtg gcagtagatc tggcacacag tattctctta agatcaacag actacagggt 240

gaagatattg gaacctatta ctgtctacag gtttctagtt ctccgtacac gtttggagct 300

ggcaccaagc tggagctcaa acggctcctca gaacaagagc ttatttccga agaagatttg 360

tagtaa 366

<210> 23

<211> 366

<212> DNA

<213> artificial sequence

<220>

<221> misc\_feature

<222> ()..()

<223> PCR products of KJ16-mut7

<400> 23

gacgtcctgg tgacccaaac tcctgcctcc ctgtctgcat ctccggatga atctgtcacc 60

atcacatgcc aggcagcca ggacattggg acttcgtagg ttgggtatca gcagaaacca 120

# 97-99E - Sequence List

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gggaaatctc ctcagctcct ggtctatagt gcaactatct tggcagatgg ggtcccatca 180
aggttcagtg gcagtaaadc tggcacacag tattctctta agatcaacag actacagggt 240
gaagatatgg gaacctatta ctgtctacag gtttctagtt ctccgtacac gtttggagct 300
ggcaccaagc tggagctcaa acggctccta gaacaaaagc ttatttccga agaagatttg 360
tagtaa 366

```

```

<210> 24
<211> 747
<212> DNA
<213> artificial sequence

```

```

<220>
<221> misc_feature
<222> ()..()
<223> Sequence showing mutations in T-cell receptor

```

```

<400> 24
gacgtcgcag tcacccaaag cccaagaaac aaggtggcag taacaggagg aaaggtgaca 60
ttgagctgta atcagactaa taaccacaac aacatgtact ggtatcggca ggacacgggg 120
catgggctga ggctgatcca ttattcatat ggtgctggca gactgagaa aggagatata 180
cctgatggat acaaggcctc cagaccaagc caagagaact tctccctcat tctggagttg 240
gctacccctt ctcagacatc agtgtacttc tgtgccagcg gtgggggggg caccttgtag 300
tttggtgcgg gcacccgact atcgggtgcta tcctccgcgg atgatgctaa gaaggatgct 360
gctaagaagg atgatgctaa gaaagatcat gctaagaaag atgcacagtc agtgacacag 420
cccgatgctc gcgtcactgt ctctgaagga gcctctctgc agctgagatg caagtattcc 480
tactctgcga caccttatct gttctggtat gtccagtacc cgcggcaggg gctgcagctg 540
ctcctcaagt actattccgg agaccagtg gttcaaggag tgaatggctt tgaggctgag 600
ttcagcaaga gcaactcttc cttccacctg cggaaagcct ccgtgcactg gagcgactcg 660
gctgtgtact tctgtgctgt gagcggcttt gcaagtgcgc tgacatttgg atctggcaca 720
aaagtcattg ttctaccata catctag 747

```

```

<210> 25
<211> 15
<212> PRT
<213> artificial sequence

```

```

<220>
<221> misc_feature
<222> ()..()
<223> Linker between PCR products to maintain correct reading frame

```

```

<400> 25

```

```

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1      5      10      15

```



## 97-99E - Sequence List

<210> 26  
<211> 4  
<212> PRT  
<213> unknown  
  
<220>  
<221> misc\_feature  
<222> ()..()  
<223> Epitope tag

<400> 26

Ile Glu Gly Arg  
1